REMARKS

This is a response to the Office Action, dated April 11, 2002, where the Examiner has rejected claims 1, 8-10, 19-20, 32-33, 40-42, 44-45, 47-48, 54-56, 63-66 and 68-84. After the present response, claims 1, 8-10, 19-20, 32-33, 40-42, 44-45, 47-48, 54-56, 63-66 and 68-84 are pending in the application. Reconsideration and allowance of pending claims 1, 8-10, 19-20, 32-33, 40-42, 44-45, 47-48, 54-56, 63-66 and 68-84 in view of the following remarks are respectfully requested.

A. Rejection of Claims 1, 10, 19-20, 66, 68-69 and 71-72 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1, 10, 19-20, 66, 68-69 and 71-72 under 35 U.S.C. § 103(a) as being unpatentable over Civanlar, et al. (EP 0741481 A2) in view of Nemoto (US 5,828,744.) Applicants respectfully disagree with the Examiner's reasons for rejecting claims 1, 10, 19-20, 66, 68-69 and 71-72.

1. Rejection of Claims 1, 10 and 69

Claim 1, in part, reads: "wherein the remote modem remains in the hold mode for no longer than a first time period, and wherein said first time period is transmitted by the local modem to the remote modem." The Examiner states that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Civanlar to transmit said predetermined interval transmitted by the local modem to the remote modem, as per teaching of Nemoto, because it reduces an ineffective [sic] load on terminal units and communication networks so that a call setting to the destination unit can be more certainly established after the waiting period." Applicants respectfully but strongly disagree with the Examiner.

Nemoto addresses a totally different problem. The problem addressed by Nemoto is as follows. When an originating terminal unit intends to communicate with a destination terminal unit by way of the ISDN network, the originating terminal unit prepares a call setting message SETUP to the destination terminal unit through the ISDN network. If the destination terminal unit is busy, it prepares a release completion message REL COMP and responds to the originating terminal unit through the ISDN network. Since the originating terminal unit cannot determine based on the release completion message REL COMP when the destination terminal unit is in call setting available state, the originating terminal keeps on sending the call setting message SETUP until it receives a successful message from the destination terminal unit. According to Nemoto, the repetitive transmission of the call setting message SETUP by the originating terminal unit creates an inefficient load on the terminal units. Nemoto proposes to reduce this inefficient load by having the originating terminal unit request a notification of a waiting period from the destination terminal unit, after which time period the destination terminal unit will be available for call setting. The destination terminal unit then provides the time period to the originating terminal unit in response to the notification. The originating terminal unit then waits for that time period prior to sending the call setting message SETUP again. (See Abstract; Col. 1, lines 20-55; FIG. 5; Col. 12, lines 13-65.)

Nemoto, however, has no application to claim 1 of the present application. First, Nemoto addresses a totally different problem in the ISDN network, which operates very differently than the PSTN network. Second, Nemoto addresses an availability time period, after which period the remote unit is available to connect to the local unit, whereas claim 1 addresses a time-out period after which the remote unit will not be available to connect and may in fact disconnect. Third, and more importantly, Nemoto teaches that the originating terminal unit requests a notification of

the waiting period from the destination terminal unit and then receives the time period from the destination terminal unit. In contrast, according to claim 1, the local modem (or the originating terminal unit) dictates the time period to the remote modem (or the destination terminal unit). Applicants respectfully request that rejection of claim 1 be withdrawn at least for the reasons stated above. Claims 10 and 69 depend from claim 1 and should be allowed at least for the reasons stated above.

2. Rejection of Claims 19-20, 66, 68 and 71-72

Claim 19, in part, reads: "the processing circuit exiting said first mode and entering the second mode in response to signals received via the telephone network and manufacturing data and presenting said data to the protocol stack while in said second mode to maintain an appearance of being in said first mode." The Examiner states that "Nemoto teaches to provide a call waiting processing method for reserving a call setting, i.e., presenting data protocol stack, in order to reduce an ineffective load on terminal units and communication networks." The Examiner then goes on to state that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Civanlar to transmit said predetermined interval transmitted by the local modem to the remote mode, as per teaching of Nemoto, because it reduces an effective load on terminal units and communication networks." Applicants respectfully but absolutely disagree with the Examiner's reading of Nemoto and reasoning to reject claim 19. Further, applicants fail to recognize the relevance of the last quotation above from the Examiner vis-à-vis claim 19.

It is unclear to applicants how Nemoto teaches, suggest or discloses, for example, the following limitations of claims 19: "manufacturing data and presenting said data to the protocol stack while in said second mode to maintain an appearance of being in said first mode." Further,

unlike the motivation in Nemoto that has been cited by the Examiner, i.e. reducing an effective load on terminal units and communication networks, claim 19 is not based on a motivation to reduce the load on terminal units and communication networks. In fact, applicants fail to recognize any similarity between Nemoto and claim 19 of the present application. To clarify the confusion, applicants would like to draw the Examiner's attention to the following portions of the detailed specification:

> The remote modem must maintain the appearance of a connection to the upper layer protocols even though the connection to the local modem has been temporarily removed. Similarly, the local modem must maintain the appearance of the connection to the networking protocols using the communication capabilities of the local modem. To carry this out, the remote modem may be communicate with upper protocol layers of the network connection with manufactured data while in the hold mode. The local modem similarly maintains the appearance of a network connection with the application requiring the data by manufacturing data and presenting it to the network stack while the two modems are on hold. (Page 5, line 19 - Page 6, line 4.) (emphasis added.)

> To achieve a continuous data session, when caller ID is received, the bottom two layers namely, the physical and the data link layer, responsible for transmission, framing, and error control of the communications link may be modified. In one embodiment, the keep alive functionality 323 within the ISP modem 321 transmits "keep alive" packet streams to the higher TCP/IP protocol layer after the modem signal is interrupted. **This deceives the higher TCP/IP layers and prevents the session from terminating**. The "keep alive" packet stream may be either data bits or control signals or both, and located within the client modem 301, the ISP modem 321 or both. (Page 18, lines 16-23.) (emphasis added.)

Accordingly, for example, a local modem in a hold state may manufacture data and present such data to its upper layer protocol in order to deceive the upper layer protocol and create the appearance that it is in data communication with the remote modem, although the data communication is in fact in the hold state. Applicants respectfully submit that Nemoto does not

remotely teach, suggest or disclose the above-cited element of claim 19. Accordingly, applicants respectfully request that claim 19 and its dependent claim 20 be allowed.

Moreover, claims 66 and 71, and their respective dependent claims 68 and 72 should be allowed at least for the same reasons stated in conjunction with claim 19.

B. Rejection of Claims 8-9 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 8-9 under 35 U.S.C. § 103(a) as being unpatentable over Civanlar, et al. (EP 0741481 A2) in view of Nemoto (US 5,828,744) in view of Hamasaki (US 5,131,025). Applicants respectfully disagree.

Claims 8-9 depend from claim 1 and at least for the reasons discussed above in conjunction with claim 1, claims 8-9 should be allowed.

C. Rejection of Claims 32-33, 40-42, 44-45, 47-48, 54-56, 63-65, 70, 73-77 and 79-83 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 32-33, 40-42, 44-45, 47-48, 54-56, 63-65, 70, 73-77 and 79-83 under 35 U.S.C. § 103(a) as being unpatentable over Civanlar, et al. (EP 0741481 A2) in view of Perlman et al. (US 5,896,444). Applicants respectfully disagree.

1. Rejection of Claims 32-33, 40-42, 44-45, 47-48, 54-56 and 70

Neither Civanlar nor Perlman comes close to teaching, suggesting or disclosing, in combination or otherwise, claim 32 of the present application. The Examiner states that "Civanlar differs from the claimed invention in not specifically teaching said handset placed off-hook by a user for dialing an outgoing call. However, Perlman teaches such (col. 5 line 35 through col. 6 line 28)." Applicants strongly disagree with the Examiner's reading of both Civanlar and Perlman. First, in both Civanlar and Perlman, the interruption in the communication is created by the call waiting signal and not the handset going off-hook. The

Examiner's attention is directed to Col. 5 lines 43-44 of Perlman, which state: "The Call Waiting signal will cause disruptions in data communications on the telephone line." Perlman goes on to state that in response to the call waiting interruption, the modem connection is disconnected and then automatically reconnected while maintaining the user's browsing state. (Col. 5, lines 54-60.) Neither Perlman nor Civanlar remotely teaches, suggests or discloses that the handset going off-hook generates an attention signal, in response to which the communication is placed on hold. Accordingly, applicants wholly disagree with the Examiner's position in rejecting claim 32 and respectfully request that claim 32 and its dependent claims 33, 40-42 and 70 be allowed.

Applicants note the Examiner's rejection of claim 48, where the Examiner states that "Perlman teaches to make an out-going call during call waiting (col. 6 lines 20-25) such that it would have been obvious to provide a dial tone." Applicants strongly disagree with the Examiner's reading of Perlman. Perlman (col. 6 lines 20-25) describes the process that is used after client 1 has disconnected as a result of the call waiting signal (not while client 1 is connected to modem pool 2), wherein client 1 is determining whether a reconnect process should start. During the reconnect process, client 1 checks to determine if any handset is off-hook (e.g., if another member of the household had picked up an extension phone and had begun to dial), see step 506 of FIG. 5, which occurs after step 503 (disconnect from modem pool) and before step 507 (redial modem pool). According to Perlman, after the connection is disconnected as a result of a call waiting signal, taking a handset off-hook would answer the call waiting and no dial tone is heard. It is only that after the call waiting is answered and terminated, a household may pick up the extension again (which in that case a dial tone may be heard) and step 506 is only designed to ensure that client 1 does not redial if the line is in use.

Further, it is clear that according to Perlman's disclosure, if a member of the household picks up an extension phone while client 1 is connected to modem pool 2, that member will not be able to hear a dial tone and/or dial a number. Instead, the connection may be lost after the modems try to retrain and maintain the connection after a long time. This is exactly one of the problems that the present invention can overcome.

Moreover, claim 44 and its respective dependent claims 44-45, 47-48 and 54-56 should be allowed at least for the same reasons stated in conjunction with claim 19.

2. Rejection of Claims 63-65

The Examiner states that "Civanlar differs from the claimed invention in not specifically teaching to switch the communication line from the first device to the third device in order to resuming [sic] the communication after expiration of the period of time. However Perlman teaches such (col. 6 lines 2-20)." Applicants respectfully disagree.

Perlman states that client 1 automatically disconnects from the modem pool 2 and then automatically reconnects to the modem pool 2 at a later time. First, Perlman teaches away from Civanlar by stating that client 1 disconnects from the modem pool 2. Second, the teaching of Perlman is that client 1 disconnects the line due to receiving a call waiting interruption, saves the browser state, reconnects by dialing into the modem pool and starts from the browser's saved state. The Examiner is making an assumption that a different modem in the modem pool 2 may answer the call during the reconnect attempt, but that is not the teaching of Perlman. In fact, under Perlman, client 1 may connect to the same modem that it was originally connected to. Further, if client 1 connects to a modem in modem pool 2 and the connection is placed on hold, based on the teaching of Civanlar, client 1 does not dial back to modem pool 2 (since it never disconnected), but proceeds with the same modem in modem pool 2 by removing the hold.

Therefore, Perlman does not teach or suggest "switching said communication line from said first modem to said third modem, such that after expiration of said period of time, said second modem communicates with said third modem over said communication line", as recited in claim 63.

Accordingly, applicants respectfully request that claim 63 and its dependent claims 64-65 be allowed.

3. Rejection of Claims 73-77

The Examiner states that "Civanlar differs from the claimed invention in not specifically teaching to provide a new communication channel for connecting telephone device A and telephone device C. However, Perlman teaches such (col. 5 line 35 through col. 6 line 28)." Applicants respectfully disagree.

Claim 73, in part, reads: "wherein said communication between said modems is placed on hold and said use of said telephone line is relinquished, and wherein a dial tone is received over said telephone line after said communication between said modems is placed on hold." The Examiner states that Perlman teaches that "a new communication channel for connecting telephone device A and telephone device C", however, the Examiner does not indicate where Perlman and/or Civanlar teach, suggest or disclose that "a dial tone is received over said telephone line after said communication between said modems is placed on hold, as recited by claim 73.

Perlman merely states that after receiving the call waiting signal, client 1 disconnects and then monitors the status of all handsets and incoming ring to determine whether it should start the reconnect process. It is well known that when the handset is placed off-hook, after client 1 disconnects as a result of receiving the call waiting signal, the handset does not receive a dial tone, rather the call waiting is answered. Furthermore, the Examiner refers to a new channel for

connecting telephone device A and telephone device C, however, the Examiner should note that Perlman teaches that the old channel is disconnected and no longer exists, whereas, according to claim 73, the old channel is placed on hold.

Applicants note the Examiner's rejection of claims 74-77, where the Examiner states that "Perlman teaches the relinquishment request is received from a third device, or the handset going off-hook, for placing a call on the telephone line (col. 6 lines 20-28)." First, it is unclear what the Examiner considers as teaching "the relinquishment request". Applicants respectfully submit that Perlman does not teach that taking the handset off-hook generates a relinquishment request. Further, and more importantly, as discussed in conjunction with claim 48 above, Perlman (col. 6 lines 20-28) describes the process that is used after client 1 has disconnected as a result of the call waiting signal (not while client 1 is connected to modem pool 2), wherein client 1 is determining whether a reconnect process should start. During the reconnect process, client 1 checks to determine if any handset is off-hook (e.g., if another member of the household had picked up an extension phone and had begun to dial), see step 506 of FIG. 5, which occurs after step 503 (disconnect from modem pool) and before step 507 (redial modem pool). In sharp contrast, claims 73-77 relate to a situation where the relinquishment request, for example by the handset, occurs while client 1 is connected to modem pool 2.

Accordingly, applicants respectfully request that claim 73 and its dependent claims 73-77 be allowed. Moreover, claim 79 and its respective dependent claims 80-83 should be allowed at least for the same reasons stated in conjunction with claim 73.

D. Rejection of Claims 78 and 84 under 35 U.S.C. § 103(a)

The Examiner has rejected claims 78 and 84 under 35 U.S.C. § 103(a) as being unpatentable over Civanlar, et al. (EP 0741481 A2) in view of Perlman et al. (US 5,896,444) in view of Ko (US 5,684,825). Applicants respectfully disagree.

Claim 78 depends from claim 73 and it should be allowed at least for the reasons discussed above in conjunction with claim 73. Further claim 84 depends from claim 79 and it should be allowed at least for the reasons discussed above in conjunction with claim 79.

E. Conclusion

For all the foregoing reasons, an early allowance and issuance of claims 1, 8-10, 19-20, 32-33, 40-42, 44-45, 47-48, 54-56, 63-66 and 68-84 pending in the present application is respectfully requested. The Examiner is invited to contact the undersigned for any questions.

Respectfully Submitted;
FARJAMI & FARJAMI LLP

Farshad Farjami, Esq.
Reg. No. 41,014

Farshad Farjami, Esq.
FARJAMI & FARJAMI LLP
16148 Sand Canyon
Irvine, California 92618
Tel: (949) 784-4600
Fax: (949) 784-4601

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